

REMARKS

By this amendment, claim 14 has been amended. Currently, claims 1-23 are pending in the application, of which claims 21-23 are withdrawn from further consideration. Accordingly, claims 1-20 are currently active in this application, of which claims 1 and 14 are independent.

Applicant respectfully submits that the above amendments do not add new matter to the application and are fully supported by the specification. In view of the above Amendments and the following Remarks, Applicant respectfully requests reconsideration and withdrawal of the objections and rejections for the reasons discussed below.

Allowed/Allowable Claims

Applicant appreciates the indication that claims 12 and 16 contain allowable subject matter. While Applicant agrees these claims are patentable over the cited references, Applicant does not agree that patentability resides in each feature exactly as expressed in the claims, nor that each feature is required for patentability of each claim.

Rejection of Claims under 35 U.S.C. §112, Second Paragraph

Claims 14-20 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite. Applicant respectfully traverses this rejection for at least the following reasons.

In this response, claim 14 has been amended to read "a second substrate facing the first substrate" as suggested by the Examiner.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §112, second paragraph rejection of claims 14-20. This amendment is not made for the purpose of avoiding prior art or narrowing the claimed invention, and no change in claim scope is intended. Therefore, Applicant does not intend to relinquish any subject matter by these amendments.

Rejection of Claims under 35 U.S.C. §103

Claims 1-11, 13-15 and 17-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 6,784,965 issued to Kim, et al. ("Kim") in view of U. S. Patent No. 6,784,457 issued to Yamazaki, et al. ("Yamazaki"). Applicant respectfully traverses this rejection for at least the following reasons.

With respect to claims 1-11 and 13, independent claim 1 recites:

1. A thin film transistor array panel comprising:
a gate line formed on an insulating substrate;
a gate insulating layer on the gate line;
a semiconductor layer on the gate insulating layer;
a data line formed on the gate insulating layer;
a drain electrode formed at least in part on the semiconductor layer;
a color filter formed on the data line and the drain electrode;
a first passivation layer formed on the color filter; and
a pixel electrode formed on the color filter, connected to the drain electrode, overlapping the first passivation layer, and *enclosed by the first passivation layer.* (Emphasis Added)

First, it is submitted that none of the cited references discloses or suggests “a pixel electrode ... enclosed by the first passivation layer” as claimed. An example of this claimed feature is shown in Fig. 2 of the present application, in which the pixel electrode 190 is enclosed by the second passivation layer 802. Regarding the claim language “enclosed by”, the specification describes that “the second passivation layer [802] overlaps the pixel electrodes 190 only near the boundaries of the pixel electrodes 190 ... such that the second passivation layer 802 does not decrease the light transmittance passing through the pixel electrode 190.” (Specification, paragraph [0062])

In this regard, the Examiner states that, in Fig. 11 of Kim, the pixel electrode 165 is enclosed by the passivation layer 151 in the Office Action, page 3. However, as shown in Fig. 11 of Kim, the drain electrode 145 is located outside of the passivation layer 151, and the pixel electrode 165 is formed on both the drain electrode 145 and the passivation layer 151. Thus, in Kim, the pixel electrode 165 is not enclosed by the passivation layer 151. The secondary reference to Yamazaki fails to cure the deficiency of Kim. For these reason, it is submitted that none of the cited references discloses or suggests “a pixel electrode ... enclosed by the first passivation layer”.

Second, there is no motivation to combine the cited references to arrive at the claimed invention. The Examiner admitted that “Kim et al. ... do not disclose a color filter formed on the data line and the drain electrode.” (Office Action, page 4) Regarding this missing feature, the Examiner stated “Yamazaki et al. discloses a color filter formed on the drain electrode” to “prevent light degradation of the active layer of the TFTs.” (Office Action, page 4). On this basis, the Examiner asserted that “it would have been

obvious ... to modify Kim's device with the teaching of Yamazaki et al. to provide a color filter formed on the drain electrode and the data line in order to prevent light degradation of the active layer of the TFTs." (Office Action, page 4). It is respectfully submitted that there is no factual support for the Examiner's assertion.

Yamazaki shows, in Fig. 3c, the source wiring 152 (corresponding to the claimed data line) is formed on the color filter 171, and hence the color filter 171 is not formed on the source wiring 152. Thus, Yamazaki does not provide any motivation to modify Kim's device such that the color filter 171 of Yamazaki is formed on the data line 141 of Kim.

Also, there is no factual support from the cited references for the Examiner's conclusion that forming a color filter on the drain electrode and the data line of Kim prevents light degradation of the active layers of the TFT. It should be noted that, in Kim, the data line 141 is formed outside of the pixel region. There is no logical answer in the Office Action as to why forming a color filter on the data line 141 prevents light degradation of the active layers of the TFT. Thus, it is submitted that there is no motivation to combine the cited references to arrive at the claimed invention.

For these reasons, it is submitted that claim 1 is patentable over the cited references. Claims 2 -11 and 13 are dependent from claim 1 and hence are also patentable at least for the same reasons.

With respect to claims 14, 15 and 17-20, independent claim 14 recites "a pixel electrode ... located substantially in the opening of the insulating layer". An example of this claimed feature is shown in Fig. 2 of the present application, in which the pixel electrode 190 is located substantially in the opening formed in the insulation layer 802.

Fig. 11A of the present application shows how the opening is formed in the insulation layer 802.

Kim fails to disclose or suggest this claimed feature. As shown in Fig. 11 of Kim, the insulation layer 151 has a contact hole 153 exposing the drain electrode 145. As shown in Fig. 12A, the pixel electrode 165 is mainly formed outside of the contact hole 153, and the portion of the pixel electrode 165 formed in the contact hole 153 is very small compared to the portion formed outside of the contact hole 153. Thus, Kim fails to disclose or suggest "a pixel electrode ... located substantially in the opening of the insulating layer."

Yamazaki shows, in Fig. 3C, the pixel electrode 158 formed on the insulating film 147 but does not show the pixel electrode located in an opening of the insulating film 147. Thus, none of the cited references discloses or suggests "a pixel electrode ... located substantially in the opening of the insulating layer."

Also, claim 14 recites "an insulating layer disposed on the color filter ... and having an opening exposing the color filter". An example of this claimed feature is shown in Fig. 14, in which the passivation film 802 is disposed on the color filters 230R, 230G, 230B and having an opening exposing the color filters 230R and 230B.

In this regard, Kim does not show any color filter as admitted by the Examiner. In Yamazaki, the insulating film 147 has openings but they do not expose the color filter 171. Thus, none of the cited references discloses or suggests "an insulating layer disposed on the color filter ... and having an opening exposing the color filter"

For these reasons, it is respectfully submitted that claim 14 is patentable over the cited references. Claims 15 and 17-20 are dependent from claim 14 and are also patentable for at least the same reasons.

Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-11, 13-15 and 17-20.

OTHER MATTERS

In this response, the specification has been amended to correct the typographical error in Paragraph [0062].


Conclusion

Applicant believes that a full and complete response has been made to the Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully Submitted,



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Date: December 9, 2005

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